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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,990	01/10/2001	Alexander Vaisburd	037/01748	8519

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EXAMINER

TABATABAI, ABOLFAZL

ART UNIT	PAPER NUMBER
2625	3

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,990

Applicant(s)

VAISBURD ET AL.

Examiner

Abolfazl Tabatabai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 10 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 is/are allowed.
- 6) ☒ Claim(s) 1-25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-6, 8-12, 14-22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (U S 5,583,903) in view of Haas (U S 4,357,535).

Regarding claim 1, Saito discloses a method for the determination of the effects of variable sag of a supporting element of a support system on an image of a slice of a subject, comprising:

(a) acquiring an image of a slice subject at an imaging position (see abstract and column 7, lines 1-7).

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However, Saito is silent about specific details regarding (b) determining said sag of said support element at said imaging position.

In the same field of endeavor, however, Haas discloses an apparatus for inspecting hand-held articles and persons carrying same comprising:

(b) determining said sag of said support element at said imaging position (column 4, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the step of determining said sag of said support element at said imaging position as taught by Haas in the system of Saito because Haas provides Saito a system for electronic inspection of articles carried by hand as well as for inspection of persons carrying such articles. The benefit of this system is to achieved by the use of an X-ray facility in a cabinet with a longitudinally extending slot along one edge thereof and adjoining entrance and exit areas.

Regarding claim 2, Haas discloses a method further comprising adjusting said image to compensate for said determined sag (column 5, lines 41-50).

Regarding claim 3, Haas discloses a method, which said acquired image is used for determining said sag (column 4, lines 11-14).

Regarding claim 4, Haas discloses a method which a quantity of radiation absorbing material, which is large enough and dense enough to create a clear and measurable image in an imaging device, is used in determining said sag (column 4, lines 11-26).

Claim 5, is similarly analyzed as claim 4 above.

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Regarding claim 6, Saito discloses a method, which said acquired image is a CT image (column 6, lines 60-65).

Regarding claim 8, Haas discloses a method for the determination of the effects of variable sag of a supporting element of a support system on an image of a slice of a subject, comprising:

(a) determining the sag of said supporting element at least one longitudinal position of said supporting element, different from the imaging position of said supporting element at which said image of a slice is acquired (column 3, lines 64-68 and column 4, lines 1-140; and,

(b) using said sag determined at said at least one longitudinal position of said supporting element different from said imaging position to determine said sag at said imaging position (column 3, lines 64-68 and column 4, lines 1-140).

Claim 9, is similarly analyzed as claim 4 above.

Claim 10, is similarly analyzed as claim 2 above.

Regarding claim 12, Saito discloses a method for the correction of the effects of different sags of a supporting element on more than one image of one slice of a subject comprising:

(a) acquiring at least one image of said slice at an imaging position (see abstract and column 7, lines 1-7);

(b) acquiring another image of said slice at a different imaging position (column 4, lines 1-18 and column 6, lines 31-41).

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(d) aligning said acquired images based on the determined sag 9column 4, lines 22-30).

However, Saito is silent about the specific details regarding (c) determining the sag at least one of said imaging positions.

In the same field of endeavor, however, Haas discloses an apparatus for inspecting hand-held articles and persons carrying same comprising:

(c) determining said sag of said support element at said imaging position (column 4, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the step of determining said sag of said support element at said imaging position as taught by Haas in the system of Saito because Haas provides Saito a system for electronic inspection of articles carried by hand as well as for inspection of persons carrying such articles. The benefit of this system is to achieved by the use of an X-ray facility in a cabinet with a longitudinally extending slot along one edge thereof and adjoining entrance and exit areas.

Claims 14 and 15 are similarly analyzed as claim 6 above.

Regarding claim 16, Saito discloses a method comprising determining the sags of said supporting element at both of said imaging positions, and aligning said acquired images (see abstract; column 4, lines 1-6 and 59-67).

Claim 17, is similarly analyzed as claim 16 above.

Claim 18, is similarly analyzed as claim 16 above.

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Regarding claim 19, Saito discloses a method wherein the determination of said sag of said slice at one imaging position is performed by calculation based on said sag of said supporting element determined at another imaging position 9column 8, lines 38-45).

Claims 20 and 21 are similarly analyzed as claim 2 above.

Claim 22, is similarly analyzed as claim 6 above.

Claim 25, is similarly analyzed as claim 4 above.

3. Claims 7,13, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (U S 5,583,903) and Haas (U S 4,357,535) as applied to claims 1and 12 and further in view of Liu et al (6,505,064 B1).

Regarding claim 7, Saito and Haas are silent about the method, which said acquired image is an NM image.

In the same field of endeavor, however, Liu discloses diagnostic imaging system comprising acquired image is an NM image (column 4, lines 22-28).

(b) determining said sag of said support element at said imaging position (column 4, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the step of determining said sag of said support element at said imaging position as taught by Liu in the system of Saito because Liu provides Saito a system that improves accuracy in depicting blood vessel lumen of imaged blood vessels, it captures blood flow time variations in vivo and also compensates for the dynamics of the blood vessel.

Claims 13 and 23 are similarly analyzed as claim 7 above.

Claim 24, is similarly analyzed as claims 6 and 7 above.

4. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardy et al (U S 6,011,828) in view of Haas (U S 4,357,535).

Regarding claim 27, Hardy discloses a method for the correction of the effects of different sags of a supporting element on more than one image of one slice of a subject, comprising:

(a) the accumulation of data from a plurality of various measurements of sag in a plurality of various situations(column 4, lines 42-47).

However, Hardy is silent about specific details regarding the utilization of said accumulated data to estimate the sag of a slice of a subject in a particular situation. In the same field of endeavor, however, Haas discloses an apparatus for inspecting hand-held articles and persons carrying same comprising:

(b) the utilization of said accumulated data to estimate the sag of a slice of a subject in a particular situation (column 4, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the step of the utilization of said accumulated data to estimate the sag of a slice of a subject in a particular situation as taught by Haas in the system of Hardy because Haas provides Hardy a system for electronic inspection of articles carried by hand as well as for inspection of persons carrying such articles. The benefit of this system is to achieved by the use of an X-ray facility in a cabinet with a

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longitudinally extending slot along one edge thereof and adjoining entrance and exit areas.

Regarding claim 28, Hardy discloses a method for the correction of the effects of variable sag of a supporting element of a support system on an image of a subject, comprising:

(a) measuring the sag of the support element at a plurality of positions and under a plurality of controlled loads (column 4, lines 42-47);

(d) adjusting an image taken of said subject at said imaging position to compensate for the estimated sag (column 4, lines 42-47 and column 5, lines 63-67). However, Hardy is silent about the specific details regarding storing these sag measurements and estimating the sag at an imaging position and under the load of a subject using said stored sag measurements.

In the same field of endeavor, however, Haas discloses an apparatus for inspecting hand-held articles and persons carrying same comprising:

(b) storing these sag measurements (column 2, lines 1-15); and,

(c) estimating the sag at an imaging position and under the load of a subject using said stored sag measurements (column 4, lines 1-14)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the steps of storing these sag measurements and estimating the sag at an imaging position and under the load of a subject using said stored sag measurements as taught by Haas in the system of Hardy because Haas provides Hardy a system for electronic inspection of articles carried by hand as well as for inspection of

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persons carrying such articles. The benefit of this system is to achieved by the use of an X-ray facility in a cabinet with a longitudinally extending slot along one edge thereof and adjoining entrance and exit areas.

Allowable Subject Matter

5. The following is an Examiner's statement of reasons for allowance.

The prior art of record fails to teach or suggest, calculation of said sag based upon the following model: a support element of length S is extended beyond its base by an extension a , the remainder of said support element, which is the supported part of the support element, is of length L ; the distance of said imaged slice from supported edge of the support element is Z ; said support element is assumed to be of uniform deformation constant EJ dependent on the material and geometry of the supporting element; the load distribution of the support element with the subject is effectively approximated by an linearly equally distributed weight q along the length of said support element; in combination into other elements and features of claim 26.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U. S. Patent (U S 6,128,522) to Acker et al is cited for MRI-guided therapeutic unit and methods.

U.S. Patent (U S 6,341,152 B1) to Sugihara is cited for X-ray computerized

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tomography apparatus.

U S. Patent (U S 4,894,855) to Kresse is cited for X-ray diagnostics system having suspended position adjustable compensents.

Contact Information

7. any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (703) 306-5917.

The examiner can normally be reached on Monday through Thursday from 9:30 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Bhavesh Mehta M, can be reached at (703) 308-5246.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for **formal** communications; please mark
"EXPEDITED PROCEDURE")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. Sixth Floor (Receptionist).

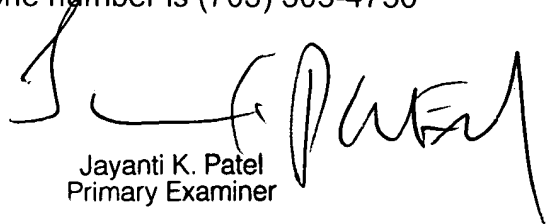
Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750

Abolfazl Tabatabai

Patent Examiner

Group Art Unit 2625

December 23, 2003



Jayanti K. Patel
Primary Examiner